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| 10/564,677                       | 10/17/2006  | Heather K. Kranz     | 58913US004          | 1712             |
| 32692                            | 7590        | 03/23/2009           |                     |                  |
| 3M INNOVATIVE PROPERTIES COMPANY |             |                      |                     |                  |
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| EXAMINER                         |             |                      |                     |                  |
| NELSON, MICHAEL B                |             |                      |                     |                  |
| ART UNIT                         |             | PAPER NUMBER         |                     |                  |
| 1794                             |             |                      |                     |                  |
| NOTIFICATION DATE                |             | DELIVERY MODE        |                     |                  |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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### Office Action Summary

**Application No.**

10/564,677

**Applicant(s)**

KRANZ ET AL.

**Examiner**

MICHAEL B. NELSON

**Art Unit**

1794

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 February 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 31-50 is/are pending in the application.
- 4a) Of the above claim(s) 43-50 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 31-42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

**DETAILED ACTION**

***Response to Amendment***

1. Applicant's amendments filed on 02/17/09 have been entered. Claims 31-42 are currently under examination on the merits. Claims 43-50 are withdrawn. Applicant's confirmation of the election made in the response of 07/28/08 is acknowledged and applicant's arguments directed towards the restriction are addressed below.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 31 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schrenk et al. (U.S. 5,103,337) in view of Soodak et al. (U.S. 4,945,203).

Regarding claims 31 and 32, Schrenk et al. discloses a non-metallic polymer based optical film which achieves the optical effects of metallic optical films at reduced costs (See Abstract and C1, L15-25 and C1, L60-C2, L10). Schrenk et al. also discloses that delamination of the layers in the film should be avoided (C7, L45-55). Schrenk et al. also discloses embodiments in which the stack has more than 100 layers (C9, L5-40). Schrenk et al. does not disclose the peripheral sealing of the layers.

Soodak et al. discloses a method of selectively welding the peripheral edges of a multilayer polymeric article (See Abstract, C7, L60-C8, L60). One having ordinary skill in the art at the time of the invention would appreciate that the welding of the peripheral edges of a multilayer laminate would result in improved delamination resistance.

The inventions of both Schrenk et al. and Soodak et al. are drawn to the field of multilayer polymeric articles and therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to have modified the laminate of Schrenk et al. by welding the peripheral edges as taught by Soodak et al. for the purposes of imparting improved delamination resistance.

6. Claims 33-35, 37-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schrenk et al. (U.S. 5,103,337) in view of Soodak et al. (U.S. 4,945,203) as applied to claim 31 above, and further in view of Fujimori et al. (U.S. 4,368,945).

Regarding claim 33, modified Schrenk et al. discloses all of the limitations as set forth above. Additionally, Schrenk et al. discloses that the optical film of his invention could be used in automobile applications (C1, L40-45). Modified Schrenk et al. does not disclose the use of the optical film in the particular glazing arrangement as set forth in instant claim 33. Fujimori et al. discloses a glazing assembly for use in automobiles which includes two bonding layers, 5 and 5', of PVB on either side of the optically functional layer, 1, in between two sheets of glass, 7 and 7' (See Abstract and Fig. 1). The PVB bonding layers are disclosed as having UV absorbing agents dispersed within their resin compositions (C4, L5-65). While the optical film of Fujimori et al. is metal based it would have been obvious of one having ordinary skill to substitute the polymer based optical film of Schrenk et al. considering the disclosed reduced production costs (C1, L15-25 and C1, L60-C2, L10).

The inventions of both modified Schrenk et al. and Fujimori et al. are drawn to the field of optical film laminates and therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to have modified the optical film of modified Schrenk et al. by incorporating it into the glazing assembly with UV absorbing bonding layers as taught by Fujimori et al. for the purposes of imparting improved UV absorbing capabilities.

Regarding claims 34, 35 and 37-42, modified Schrenk et al. discloses all of the limitations as set forth above. Additionally, Fujimori et al. discloses that the PVB layers are

press-bonded to the optical film (C3, L50-60). Since the sheets are coextensive, the bonding of the optical film and the PVB layers is considered fully bonded. The peripheral edges of all the layers in the glazing assembly are disclosed as being substantially coextensive (Fig. 1). Since the bonding PVB layers do not surround the exposed edge of the optical film (Fig. 1) the optical film is not fully encapsulated by the bonding layers. Soodak et al. discloses that the layers of the multilayer object, when processed according to his invention, are welded together (See Abstract) which results in the fusion of the layers to the point of intermingling. Since the welding effect is localized along the periphery, the unwelded regions would not be fused. Regarding the width (i.e. instant depth) of the weld area in the cutting operation of Soodak et al., since the disclosure states that defocused (i.e. welding) diameter of the beam can be between 0.25 to 0.5 inches, and since the focused portion (i.e. cutting) of the beam can be blocked through a shutter to facilitate only welding and no cutting, one having ordinary skill in the art would adjust the amount (i.e. thickness) of welded material, relative the non-peripheral, unwelded material, in order to optimize the material strength and delamination resistant properties of the weld.

7. Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schrenk et al. (U.S. 5,103,337) in view of Soodak et al. (U.S. 4,945,203) and further in view of Fujimori et al. (U.S. 4,368,945) as applied to claim 33 above, and further in view of Gourio (U.S. 6,334,382).

Regarding claim 36, modified Schrenk et al. discloses all of the limitations as set forth above. Schrenk et al. does not disclose that the optical film extend beyond the peripheral edge of the bonding layers. Gourio discloses an optical laminate in which an optical layers (3 and 2) extends past the bonding layers (9) (Fig. 2). Gourio also discloses that bonding layer 9 can be made into two separate layers on either side of the optical layer (3 and 2) by reducing the gap

between portion 3 and portion 2 (C3, L25-50). The extension of the layer (i.e. portion 3) is disclosed as improving impact resistance of the glass laminate (C2, L5-20).

The inventions of both modified Schrenk et al. and Gourio are drawn to the field of optical laminates and therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to have modified the optical film layer dimensions of modified Schrenk et al. by extending the layer as taught by Gourio for the purposes of imparting improved impact resistance.

***Response to Arguments***

8. Applicant's arguments filed on 02/17/09 are moot in light of the new grounds of rejection which were necessitated by applicant's amendments. Arguments which are still deemed to be valid are addressed below.

9. Regarding applicant's arguments that the combination of Schrenk et al. and Soodak et al. is improper, the examiner disagrees. Schrenk et al. is directed towards a multilayer polymeric optical stack. It is disclosed that the stack of Schrenk et al. should not be delaminated (C7, L45-55). Soodak et al. discloses a method of locally welding and cutting along the peripheral edges of a multilayer polymeric film (See Claim 1). While the specific use of this method is mentioned for bags in Soodak et al., the general methodology of localized cutting and welding of multiple polymeric layers (i.e. preventing delamination via laminating) would be directly applicable to the polymeric multilayer stack needing anti-delamination properties in Schrenk et al.

10. Regarding the "autoclave" limitation in claim 31, the limitations directed towards the film resisting delamination under autoclave conditions are intended use limitations and therefore carry limited patentable weight. The only positive limitations applicable to the laminate are that

the film be formed “so as to reduce delamination during autoclave glazing lamination processes.” Since such a process is not required of the film, it is only limited as an intended use (i.e. if the film were put into an autoclave glazing lamination process, it would reduce delamination).

11. Regarding applicant’s arguments against the restriction, as shown above the arguments are not persuasive. Moreover, applicant’s election of Group I in the reply of 07/28/08 resulted in the examination of the claims of Group I and therefore the restriction is made final.

***Conclusion***

12. Applicant’s amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL B. NELSON whose telephone number is (571) 270-3877. The examiner can normally be reached on Monday through Thursday 6AM-4:30PM.



If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Sample can be reached on (571) 272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David R. Sample/  
Supervisory Patent Examiner, Art Unit 1794

03/10/09  
/MN/